STATE OF MISSOURI
Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MEMORANDUM

DATE: APR 10 2006

TO: 099-0003-020 File, The Doe Run Company – Smelter Division

FROM: James O. Hill, Environmental Engineer
Air Pollution Control Program

SUBJECT: Response to Public Comments

Washington University in St. Louis, School of Law, requested a Public Hearing on the draft Title V operating permit for the Herculaneum smelter. The Public Hearing was held in the Herculaneum, Missouri City Hall on May 26, 2005.

Written comments were received as follows: one comment from Mr. Lawrence R. O'Leary, a current resident of the city of Herculaneum, Missouri and a member of the local Community Action Group (CAG) of Herculaneum on June 3, 2005. Twenty-one comments were received from Ms. Maxine I. Lipeles, Director of the Interdisciplinary Environmental Clinic at Washington University of St. Louis on behalf of the Missouri Coalition for the Environment and Jack and Leslie Warden, on June 6, 2005. Six comments were received from Stacy J. Stotts, of the law firm Stinson Morrison Hecker on behalf of the Doe Run Company on June 6, 2005. The comments are addressed in the order they appear within the submittals.

Mr. Lawrence O'Leary's Comment

Comment # 1: I support the idea that the document appears to be unnecessarily complicated and have trouble understanding the meaning of the report. I realize that we are not talking about a simple topic here and there is need for being exact and legally accurate. But I believe those objectives can be achieved and yet break much of the permit down into understandable English.

The language of the document should also be adjusted to incorporate clear and unambiguous language regarding the specific actions to be taken by Doe Run, specific and verifiable criteria for Doe Run to achieve, specific due dates by which these measurable and specific criteria are to be achieved, specific timetables for Doe Run to remedy the achievement of a missed criterion, and the consequence of such a failure. The residents of Herculaneum have been living with the problem of contamination from harmful substances over decades.

Many citizens feel let down by the EPA as a result of that agency's reluctance to hold Doe Run's feet to the fire for violations of basic environmental standards.

I have attended many meetings of the CAG in which resident after resident would complain about the harmful lead, cadmium and arsenic levels in their houses, yards and roads.
The response is either, "the results of our study on that are not conclusive yet." Or, "we are examining Doe Run's response to our proposal of six weeks ago." In all fairness, the EPA and DNR have accomplished some things such as the buy out of a limited number of the most contaminated houses as well as the yard clean ups. However, these achievements and the resulting feelings of some success are eroded by the continuing and very recent data that substantiate a rapid rate of recontamination.

The residents of Herculaneum continue to be at substantial health risk. Our efforts to hold Doe Run accountable for the devastation that their damage to our community has caused, has not produced a sufficient and sustainable solution to the problem that faces every resident every day. DNR has assisted us in the past and we continue to need your vigilance and legal support.

The citizens are tired of this fight and tired of fighting with no productive outcome. Many of the residents are frustrated at what we perceive to be a form of "analysis/paralysis" otherwise known as talking and not doing. One particular basis for this form of analysis/paralysis is the virtual unavailability of clear, verifiable and enforceable documents and agreements, which citizens can understand and count on.

Let me close by communicating our gratitude for past assistance by DNR and a profound request that you take the action that is needed in making this operating permit a viable, understandable and enforceable document that will give the residents of Herculaneum access to a clean environment that most Missouri residents have in their municipal and rural environments. I believe that these goals can be well served by implementing the major suggestions that were made orally by Ms. Maxine Lipeles at the public meeting.

Response to Comment #1: The Part 70 Operating Permit is a compilation of the various rules, standards and regulation limitations that apply to an installation's air emissions along with requirements for monitoring, record keeping and reporting. The Statement of Basis is not part of the permit, but is provided as a means of explaining why regulations are or are not applicable, corrections to permits, information on required submittals, calculations and test results. This format has been used successfully by the Air Pollution Control Program (APCP) on hundreds of permits. The permit was written as clearly as possible within our constraints and can not be changed unless very specific proposals are received.

The permit contains clearly stated requirements for Doe Run to take regarding demonstrating compliance with stated limits, monitoring procedures, record keeping and reporting. The consequence of failure to achieve specific criteria is an enforcement matter and is not placed in an operating permit unless it is stated in a rule, construction permit, SIP, Abatement Order, Settlement Agreement, Court Order, or Administrative Order On Consent. Permit Condition PW005 is an example.

Ms. Maxine I. Lipeles's Comments

Comment I. The Stakes Are High.
The single most valuable aspect of a well-drafted Title V permit will be to improve the smelter's compliance with applicable federal and state air pollution requirements. As the EPA stated in promulgating its Part 70 regulations to implement the Title V program: "The program will generally clarify, in a single document, which requirements apply to a source and, thus, should enhance compliance with the requirements of the Act."

Few goals should be more pressing to the DNR's air program than enhancing the Herculaneum lead smelter's compliance with air pollution requirements. Unfortunately, the permit as presently drafted does not meet the requirements or promise of the Title V program, and does virtually nothing to enhance the ability of DNR, or the public, to ensure that Doe Run operates its smelter in compliance with the law.

Given the history of this smelter's operations, and the unforgivable harm it has already imposed on the Herculaneum community, the potential to craft the Title V permit to help ensure Doe Run's compliance cannot be understated.

For decades, the area surrounding the smelter contained concentrations of lead in the ambient air that were several multiples of the national, health-based air standard (i.e., the National Ambient Air Quality Standard ("NAAQS")) for lead. Notwithstanding sporadic enforcement efforts by DNR, including a 1980 Consent Order, a 1990 Consent Order, a 2001 Consent Judgement, and a 2001 Administrative Order on Consent (to which the U.S. Environmental Protection Agency ("EPA") was also a party), the Herculaneum community was continually subjected to ambient lead concentrations well in excess of the lead NAAQS until late 2002.

Excessive lead emissions from the smelter's operations caused extensive contamination to the residents and environment of Herculaneum. After its most comprehensive study of childhood lead poisoning in Herculaneum, the Missouri Department of Health and Senior Services released a Health Consultation in February 2002. The findings, as summarized on the DNR's web site, include the following:
Overall the rate of elevated blood-lead (over 10 micrograms per deciliter) in children 6 years of age and under in Herculaneum was 28 percent. The rate of elevated blood-lead in children residing east of Highway 61-67 was 45 percent, which is the highest recorded in the state.
The DHSS Health Consultation determined a circle of contamination existed around the smelter. The elevated blood levels in children under 72 months of age were
- 23 percent - between 1 mile and 1 ¼ mile of the smelter
- 20 percent - between ¾ and 1 mile of the smelter
- 35 percent - between ½ and ¾ mile of the smelter
- 52 percent - between ¼ and ½ mile of the smelter
- 56 percent - within ¼ of the smelter.

Although the DNR and Doe Run subsequently negotiated an agreement requiring Doe Run to offer to buy the homes of residents living within approximately ¼-mile of the smelter, the statistics above make clear that children living outside of the buyout zone are still very much in harm's way in the event of excessive lead emissions from the smelter.

Unfortunately, the threats posed by Doe Run's excessive lead emissions are by no means behind us. First, as the DNR has acknowledged by suing the EPA in federal court to force a review (and revision) of the existing NAAQS, the lead NAAQS is out of date and inadequate to protect the public health of Herculaneum residents. The failure to review the lead NAAQS is more than a mere procedural violation of the CAA. Lead exposure from the ambient air presents a health risk to many citizens in the State of Missouri and beyond. By failing to review the lead NAAQS in a timely manner, the Administrator of the EPA places all citizens of the United States at greater risk for exposure to unhealthy doses of lead in the ambient air. This should not be allowed to continue.

Second, even when Doe Run was complying with the outdated NAAQS, its emissions were recontaminating residential yards in Herculaneum at an alarming rate. At the May 17, 2005 Herculaneum CAG meeting, the DNR presented the following regarding recontamination:

• Yard soil lead levels have increased significantly over time within ¾ mile of the smelter
• DNR updated its soil lead recontamination analysis with EPA data through December 2004
o Less than ¼ mile from smelter: soil concentrations may exceed 400 ppm lead in a little over 3 years
o ¼ to ½ mile: soil concentrations may exceed 400 ppm lead in 5 years
o ½ to ¾ mile: soil concentrations may exceed 400 ppm lead in a little over 6 years.

Third, while the above estimates are based on data through December 2004, when Herculaneum was still meeting the lead NAAQS, Doe Run is no longer complying with this outdated, unprotective standard. A few days before releasing the draft Title V permit for public comment, the DNR issued to Doe Run a Notice of Violation for causing the Herculaneum area to exceed the lead NAAQS for the first calendar quarter of 2005. Whereas the (outdated, unprotective) NAAQS is set at 1.5 micrograms of lead per cubic meter of air, daily readings in Herculaneum at the Broad Street monitor nearby the smelter include two daily readings of 35.8 and 32.9, as well as one of 14.5, one of 5.8, two above 4, five above 3, and five above 2.1.
In short, there are pressing public health reasons why this operating permit should maximize its legal potential to ensure that this facility, once and for all, operates in compliance with all applicable air pollution requirements. Although a Title V operating permit does not subject a facility to additional pollution control requirements beyond those otherwise applicable, it is by no means an insignificant document. Its key functions include (1) making clear a facility's air pollution obligations for the benefit of the facility itself, the regulatory agencies, and the public; and (2) imposing monitoring, reporting, and other requirements sufficient to ensure that the facility operates in compliance with those obligations. As presently drafted, the permit is largely ineffective in fulfilling either of these goals.

Response to Comment I. The draft operating permit, as corrected, does comply with the Title V requirements. All of the current applicable rules and regulations, their limits, equipment requirements, monitoring, testing, record keeping and reporting requirements are identified. Doe Run has been in compliance with Missouri state rule 10 CSR 10-6.120 in five tests back to April 2001. Compliance with 40 CFR part 63, subpart TTT has been demonstrated in four of five tests since April, 2001. A test in April, 2002 was not in compliance and NOV No. 051503 SF was issued requiring a retest. A test of 40 CFR part 60, subpart R equipment has demonstrated compliance. The NAAQS standard requires that the calendar quarter arithmetic mean not exceed the 1.5 micrograms per cubic meter. The required monitoring demonstrated compliance from the third quarter of 2002 through the fourth quarter of 2004. Violations of the National Ambient Air Quality Standard for lead were recorded for the first three calendar quarters of 2005. [Note: This noncompliance is being addressed through a separate State Implementation Plan (SIP) action. Additionally, the APCP continues to work cooperatively with the department's Hazardous Waste Program and the U.S. EPA to evaluate and take measures to address the recontamination problems.] The APCP believes the monitoring and testing required by the draft permit have proven adequate to detect noncompliance with the regulations when it occurs. No changes will be made to the permit from Comment I.

Comment II.
Failure to Include Enforceable Compliance Schedules
A. Legal duty: When a facility is not complying with any applicable air pollution requirements at the time its Title V permit is issued, the permit must contain an enforceable compliance schedule, and require the submission of certified progress reports at least every six months. 40 C.F.R. §§ 70.5(c)(8)(iii)(C) and 70.6[(c)](3) require that if a facility is in violation of an applicable requirement and it will not be in compliance at the time of permit issuance, its permit must include a compliance schedule that meets certain criteria. For sources that are not in compliance with applicable requirements at the time of permit issuance, compliance schedules must include "a schedule of remedial measures, including an

enforceable sequence of actions with milestones, leading to compliance."

B. **Violation of National Ambient Air Quality Standard for Lead**
The draft permit makes no mention of the fact that DNR issued to Doe Run a Notice of Violation dated April 20, 2005, just as DNR was sending out the draft permit for public comment, because Doe Run had caused the Herculaneum area to exceed the National Ambient Air Quality Standard ("NAAQS") for lead during the first calendar quarter of 2005. In fact, the draft permit (p. 14) contains the erroneous statement that the quarterly lead standard has not been violated since late 2002. The only permit condition pertaining to the lead NAAQS is Plant-Wide Condition 005, which simply copies language from a 2001 Consent Judgment between Doe Run and the DNR. Unfortunately, while Doe Run has apparently already performed the actions required by that Consent Judgment, they have not been sufficient to maintain compliance with the lead NAAQS. In light of the recent NOV, Title V requires DNR to devise a new, enforceable, compliance schedule to ensure Doe Run's compliance. Inexplicably, the permit neglects to note the 2001 Administrative Order on Consent ("AOC") entered into by the DNR, EPA, and Doe Run. With respect to efforts to attain the lead NAAQS, its provisions include the following: In the event that there is a violation of the quarterly lead standard which occurs after implementation of all additional controls under the schedule specified in paragraph F above, Doe Run shall comply with the requirements of paragraph H.1.a above. The requirement to comply with paragraph H.1.a shall commence on the first day of the calendar quarter following receipt by Doe Run of the notice from EPA and/or MDNR that there is a violation of the quarterly lead standard referred to in paragraph G. The remedies in paragraph H.1.a. include further emissions limitations (80% of emissions used to develop the control strategies in the State Implementation Plan), as well as production restrictions.
The draft permit must reference the AOC and incorporate its emissions limitations and/or production restrictions as the starting point for a compliance schedule to address Doe Run's violation of the lead NAAQS.

Response to Comment II.A and B. The draft operating permit did not mention the April 20, 2005 Notice of Violation (NOV) to Doe Run because the draft was sent to Public Notice preparation on April 13, 2005 and the Public Notice and copies of the draft were sent out on April 20, 2005. The draft has been corrected to include the April 20, 2005 NOV and to remove "there has not been a violation of the quarterly lead standard beginning with the third quarter of 2002." The Settlement Agreement compliance schedule for violation of the Lead NAAQS was in Permit Condition PW005 on pages 14 and 15. This has been changed to the AOC requirements. The compliance schedule in PW005 is still in effect.

Comment II.C.
Four-Year Ongoing Failure to Develop and Implement Startup, Shutdown, Malfunction Plan
Plant-Wide Condition 004, based on the federal MACT regulations governing emission of hazardous air pollutants, requires Doe Run to develop and implement a Startup, Shutdown, and Malfunction Plan ("SSMP") to minimize the risk of emissions during startup, shutdown, and malfunction, and to establish a program to correct and prevent malfunctions. The permit states: "This plan shall be developed by the permittee by the source's compliance date for 40 CFR part 63, subpart TTT. [PW 004(c)." Doe Run's compliance date was May 4, 2001. 40 CFR § 63.1545(a).

Although it is impossible to learn this from reading the draft permit, Doe Run does not yet have an SSMP for the Herculaneum smelter. Given the frequency with which Doe Run invokes purported malfunctions" to explain emissions exceedances – as it recently did in response to the lead NAAQS NOV, this ongoing, four-year violation is no small oversight. Title V requires DNR to ensure that Doe Run develops and implements an adequate SSMP before the final Title V permit is issued, or at least to include in the permit.

a specific, enforceable compliance schedule for the development, approval, and implementation of an adequate SSMP.

Response to Comment II.C.: The APCP did not find Doe Run's original SSMP submittal adequate and has taken steps to provide guidance for the development of an acceptable plan. A second submittal received October 21, 2005 is considered improved though the Compliance/Enforcement Unit is still evaluating this draft SSMP. A Compliance Plan requirement has been added to Permit Condition PW004 as was requested.

Comment II.D.
Continuous Violation of 10 CSR 10-6.170 (1)(A)
Permit Condition PW002, based on 10 CSR 10-6.170, requires that no "fugitive particulate matter emissions...go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line or origin." Although fugitive emissions are not prohibited per se, this regulation requires that no fugitive particulate matter be found on surfaces outside of Doe Run's boundaries.

For years, Doe Run has been continuously in violation of this condition. Tests of road dust clearly indicate that lead dust from Doe Run is on the public roads of Herculaneum, well outside the facility's boundaries. Furthermore, this lead dust is at least in part comprised of fugitive particulate matter from the Doe Run smelter. In addition, as discussed above, recontamination of previously-remediated yards is occurring at extremely high rates. Doe Run is clearly in violation of 10 CSR 10-6.170 (1)(A), and this continued violation exposes the community to higher amounts of lead. Title V requires DNR to devise an enforceable compliance schedule to ensure Doe Run's compliance with this regulation.

Response to Comment II.D. The Consent Agreement, AOC, Order to Abate and Cease and Desist Violations, Notification of Need for Additional Work to Address Emergency Conditions, Settlement Agreement, 40 CFR part 63, subpart TTT and, 10 CSR 10-6.120 all address fugitive emission controls and these requirements have resulted in lead emission reductions. However, the department acknowledges the recontamination of streets and yards is a serious concern and is working cooperatively with the department's Hazardous Waste Program and the U.S. EPA to evaluate this matter to determine the most appropriate course of action.

Comment II.E.
Potential Failure to Comply with New Source Review and/or New Source Performance Standards Requirements Regarding Changes to Installation
New source review:
When a facility undergoes modifications that increase its potential emissions, it presumptively needs a construction permit under 10 CSR 10-6.060. Because the Herculaneum area is nonattainment for lead, in order for Doe Run to obtain a construction permit for changes related to increased potential lead emissions, it must, among other things: (1) obtain sufficient emissions offsets to ensure reasonable further progress toward attainment; (2) demonstrate that all of its facilities in the State of Missouri are subject to emission limitations and are in compliance, or on a schedule for compliance, with all applicable requirements; and (3) demonstrate that its lead emissions will be controlled by the lowest achievable emission rate (LAER). 10 CSR 10-6.060(7).

For the most recent evidence of this, see Quarterly Road Sampling for April 18, 2005, distributed at May 17, 2005 Herculaneum CAG meeting. Attached hereto as Exhibit D.

See Table 4 and Figure 2, excerpted from Doe Run Lead Emission Inventory, March 30, 2000. The included text describes the different sources, or departments, shown in Table 4 and Figure 2. Attached hereto as Exhibit E.

In the mid to late 1990s, Doe Run made numerous changes to its facility, including the construction of a new main stack. Apparently in conjunction with these changes, the state regulation specifically limiting this facility's lead emissions was amended effective 2001, providing for an 80% increase in the facility's allowable lead emissions. Prior to the amendment, the regulation specified the following limits:

Prior Allowable Emissions lbs/day
Sinter Plant Southend Baghouse 3.6
Main Stack 446.6
Sinter Plant Crusher Stack 21.8
Smooth Rolls Baghouse 2.2

Total 474.2

After the amendment, the regulation now sets the following lead limits:
Current Allowable Emissions lbs/day
Main Stack 794.0
Number 7 & 9 Baghouse Stack 56.6
Number 8 Baghouse Stack 8.2

Total 858.8
The draft permit makes no reference to the amendment in the regulation, which is odd because the amendment provided for such a dramatic increase in the facility's permissible lead emissions and it occurred after the 1997 submission of Doe Run's initial Title V application. Documents in DNR's publicly-available files suggest that the increased limit was related to the construction of a new main stack. The record is ambiguous, however. DNR sent Doe Run a letter in September 1995, stating that no construction permit was required for construction of the main stack because it would "not involve any appreciable change either in the quality or nature, or any increase in either the potential to emit or the effect on air quality, of the emissions of any air contaminant."

That letter makes clear that the new main stack would be subject to the then-existing regulatory limit of 446.6 pounds of lead per day. Two years later, however, a letter from DNR to Doe Run explains that the new main stack is not subject to those limits in 10 CSR 10-6.120, and that "new, enforceable emission limits will be developed during the SIP amendment process."
It is our understanding that emissions from the new main stack increased because additional emissions streams were vented to the main stack that had previously been vented elsewhere. Indeed, when emissions from the new main stack were estimated as a part of Doe Run's Lead Emissions Inventory (LEI), lead levels above the then-existing limit were frequently shown.

However, the inclusion of other emission streams does not explain why the total allowable lead emissions for the facility increased by over 80%, from 474.2 lb/day to 858.8 lb/day. It is not readily apparent that replacing the main stack alone would result in increases in emissions from the smelter operation. However, in light of the changes in emissions limits and other modifications that occurred in a similar timeframe, DNR must at least provide an explanation for these circumstances. If the construction of the new main stack and/or other changes during this period triggered the dramatic increase in permissible lead emissions, then why was Doe Run not subject to the need for a construction permit and its associated

requirements, including offsets and LAER-based emission controls? At a minimum, the draft permit must discuss this issue and answer this question. If the DNR erroneously declined to apply the construction permit requirements to Doe Run for this change, or series of changes, then the company remains in ongoing violation of the duties to obtain offsets and adopt LAER-based controls on its lead emissions. The draft permit should be revised accordingly.

In contrast to LAER (lowest achievable emission rate), the amended regulations purport to allow Doe Run to emit more lead than it is legally allowed to emit under federal law. Doe Run's production capacity is 250,000 tons of lead per year. If the smelter operates in compliance with the MACT standard of 1 pound of lead emissions per ton of lead produced, then its lead emissions would not exceed 125 tons per year. Under the "limit" stated in the current version of 10 CSR 10-6.120, however, Doe Run is allowed to emit up to 157 tons per year. In other words, on an annual basis, this standard allows Doe Run to emit more lead than the smelter is physically capable of emitting, assuming compliance with the MACT standard.

New source performance standards:
If the new stack and/or associated changes resulted in an increase in lead emissions, did it also increase the emission of other pollutants? Why did such changes not trigger the application of new source performance standards for all affected processes? See 10 CSR 10-6.070 and 40 CFR Part 60, Subpart R. The draft title V permit does not address these questions, and it leaves the public guessing as to why these significant restrictions were not deemed applicable.

Response to Comment II.E. The changes in lead emission limits for 10 CSR 10-6.120 were the result of the development of predictive and culpability models for the 2000 revision of the lead SIP for the Herculaneum smelter, as covered in pages 13 through 21 of the 2000 SIP, and the March 30, 2000 Lead Emission Inventory . The new stack did not increase lead emissions. It became the emitting point for a number of smaller controlled emission points and for process fugitive emissions that are now controlled. There were no changes to the processes. Installing control devices such as baghouses and enclosures, does not require a construction permit.

The state rule allows 794 lbs. of lead to be emitted from the main stack per day. Subpart TTT limits main stack emissions to 1 lb. of lead per ton of lead produced. Lead production was limited by the 2000 lead SIP (PW005) to 80,808 tons of metal cast per each calendar quarter. Therefore, the SIP and subpart TTT limited yearly main stack lead emissions to 161.6 tons per year, which is more than that allowed by the state rule. The current limit of 50,000 tons of lead produced per quarter reduces the limit under subpart TTT to 100 tons per year. This limit has no affect on the daily limit of the state rule. The changes to 10 CSR 10-6.120 emission limits are now mentioned in the Statement of Basis.

Comment III. A. 1.(a)
Failure to Require Adequate Monitoring of the Smelter's Emissions
A. Title V requires DNR to impose various monitoring requirements to ensure that facilities are actually complying with the pollution control obligations. The draft Doe Run Herculaneum permit, however, lacks such monitoring requirements. For example, notwithstanding the history of violations at this facility, and the resulting lead-poisoning of the children of Herculaneum, the permit requires no routine monitoring of lead emissions from the main stack. In addition, notwithstanding a history of community complaints about sulfur dioxide emissions, the permit does not require any monitoring of sulfur dioxide emissions from the facility.

Periodic monitoring applies where the regulations provide an emissions limit but not a monitoring requirement. In that event, the Title V permit must provide "periodic monitoring sufficient to yield

reliable data for the relevant time period that are representative of the installation's compliance with the permit." In addition, even where "periodic monitoring" requirements do not apply, the permit must contain monitoring sufficient to assure compliance with applicable requirements. 10 CSR 10-6.065(6)(C)3.A. In at least two instances of great significance to the health and welfare of the Herculaneum community, the permit contains emissions limits without corresponding monitoring requirements.

Facility-wide issues:
As part of the Missouri SIP for lead, Missouri regulations impose the following limits on lead emissions from the Doe Run Herculaneum smelter:
- 794 lbs lead/24 hrs from the main stack
- 56.6 lbs lead/24 hrs lead from number 7 & 9 baghouse stack
- 8.2 lbs lead/24 hrs from number 8 baghouse stack

10 CSR 10-6.120(3)(C)I. These limits are included in the draft permit, condition (EU0010 through EU0160)-001, p.22 [Emission Limitation Standards for Process and Process Fugitive Sources (h)]. However, neither the regulations nor the draft permit requires Doe Run to monitor lead emissions from the main stack, or from the baghouse stacks, to determine whether its actual emissions are within these regulatory limits. The only monitoring requirement in the permit for lead emissions is an annual or bi-annual test to determine compliance with different limits imposed under the federal MACT standards. Permit pp. 21-22. The MACT limits are different from the Missouri SIP limits, and no monitoring is required to ensure compliance with the Missouri SIP limits.

In addition, the planned, annual MACT compliance tests conducted thus far cause one to question whether the smelter's daily emissions comply with the daily emissions limits in the Missouri SIP. One annual test, conducted April 2002, showed emissions in excess of the MACT limits and caused the DNR to issue a Notice of Violation. Although the Statement of Basis did not report that result, stating instead "result rejected; non representative" (SB-7), smelter production was only 66 percent of the annual production average when that "non representative"test was conducted.

The daily ambient air readings collected near the Doe Run facility (Broad Street lead NAAQS monitor) show extreme variability from day to day. In light of the fact that the Doe Run smelter is the only source of ambient lead, this suggests that lead emissions from the smelter vary dramatically from day to day. Hence, a stack test conducted only once a year – or, as is now the case, once every other year – is plainly not sufficient to satisfy the periodic or compliance monitoring requirements of Title V. 10 CSR 10-6.065(6)(C)1.C(I)(b) and 10-6.065(6)(C)3.A.

The bottom line is that Doe Run does not routinely monitor lead (or any other) emissions from its main stack. It does a planned compliance test, currently required only once every two years, but no ongoing, routine monitoring. Given the paucity of data, and some questions raised by the little data available, neither the DNR nor the public can know whether the smelter is complying with the daily limits in the Missouri SIP. Indeed, the variability in the lead NAAQS readings, including numerous extremely high readings virtually every month, suggest that Doe Run may well be exceeding the SIP's daily limits on a not-infrequent basis.

Finally, 10 CSR 10-6.120 places emissions limits on the baghouses as well as the main stack. The annual or bi-annual MACT compliance tests address the main stack, but not the baghouses. The Statement of

Basis (SB-6) refers to only *one* test (in December 2002) demonstrating compliance with the daily baghouse emissions limits.

Title V gives DNR the opportunity, as well as the legal duty, to impose periodic monitoring to ensure that lead emissions from the main stack, and from baghouse stacks 7 through 9, comply with the SIP's daily emissions limits. The draft permit should be revised to require Doe Run to test lead emissions from its main stack, and from baghouses 7 through 9, on at least a weekly – if not continuous – basis to ensure compliance with the SIP's daily emissions limit. Indeed, the DNR has considered requiring DNR to conduct continuous stack monitoring as a means of ensuring compliance and protecting the Herculaneum community from excessive lead emissions. If continuous monitoring is not required, then daily or weekly tests should be performed when the facility is operating at maximum production for each day or week.

Because the permit lacks monitoring regarding compliance with the SIP emissions limit, it also lacks reporting of monitoring results. In terms of reporting, the permit should require Doe Run to notify the DNR within ten days of any exceedances of the daily lead emissions limits, and should further require Doe Run to submit all lead emissions monitoring data to the DNR with the semi-annual reports otherwise required under the permit. These reporting requirements are essential to enable the DNR, and the public, to determine whether Doe Run is operating the Herculaneum smelter in compliance with the lead emissions limitations specified in the Missouri SIP and Title V permit.

Response to Comment III.A.1.(a) The draft permit provides adequate monitoring and testing for determining compliance with the regulations. One hundred percent of the MACT lead regulation, subpart TTT, is in the draft permit. The rule clearly states that stack testing to determine compliance with the lead limit shall be conducted yearly. If the three most recent compliance tests demonstrate compliance with the emission limit the permittee shall be allowed up to 24 months from the last compliance test to conduct the next test.

The testing for lead in 10 CSR 10-6.120 uses the same procedures as the MACT standard, therefore, the main stack emissions for 10 CSR 10-6.120 are determined at the same time as they are for the MACT rule. The only present requirement to test baghouses 7 through 9 is the initial test, which is the same as required by the New Source Performance Standard (NSPS) 40 CFR part 60, subpart R.

The APCP is not aware of any generally available technology to measure lead on a continuous basis. Therefore, the best available method to monitor compliance continuously is through a surrogate measure. Therefore, all baghouses emitting through the main stack and baghouses 7 through 9 have leak detectors for monitoring relative particulate matter loading on a continuous basis. Permit Condition (EU0010 through EU0160)-001 and the Baghouse S.O.P. Plan explain the monitoring, record keeping and reporting requirements for the operation of the leak detectors. Stack testing for lead emissions on a schedule suggested in Comment III.A. is not a practical answer, because of the excessive time required for obtaining and analysis of the samples as well as the cost.

The APCP believes because of the main stack height, stack flow and buoyancy effect from the exit gas temperature, that the main stack emissions contribute little to the ambient lead monitored near the installation. The main contributor is believed to be wind erosion, as evidenced by the May, 2005 lead levels after over 100 enclosure roof and siding panels at the Herculaneum smelter were lost during a wind storm.

Comment III.A.1.(b)
Emission unit-specific issues:

Permit Conditions EU0150-003 (pp. 29), EU0150-004 (pp. 29-30), (EU0160 and EU0170)-002 (pp. 30-31), and EU0190-001 (pp. 37), based on previously issued construction permits, impose emission limits of <0.6 tons of lead in any 12-month rolling average for the emissions units covered by those conditions. Although the draft permit requires baghouse pressure drop monitoring and associated recordkeeping and reporting for all of these emissions units, it does not require periodic monitoring of actual emissions to ensure (1) the continued accuracy of the given emission factors for the baghouses and (2) that, even when the baghouses are functioning properly, the emission limits are being achieved. The draft permit should be revised to require periodic emissions testing in addition to baghouse pressure drop monitoring. Furthermore, the following changes should be made to individual permit conditions:
- For Permit Condition EU0190-001, initial performance testing of the baghouse should be required.
- For Permit Conditions EU0150-003 and EU0150-004, the draft permit should specify a range within which the baghouse pressure drop must be maintained. This range should be consistent with the Low alpha baghouse "Normal Baghouse Differential Pressure Operating Range" of 4"-14" listed on pp. 76.
- For Permit Condition (EU0160 and EU0170)-002, the disparity between the baghouse pressure drop listed on pp. 31 (2"-10" water column) and those described as the "Normal Baghouse Differential Pressure Operating Range" on pp. 76 (3"-14") should be clarified. The underlying construction permit requires the baghouse pressure drop to be "maintained with the design conditions specified by the manufacturer's performance warranty," and this requirement should be satisfied by the resolution of the discrepancy.
- For Permit Condition EU0150-004, Emission Limitation (c) should be clearly labeled as "Condition 1."

Response to Comment III.A.1.(b) EU0150-003, EU0150-004, (EU0160 and EU0170)-002 and EU0190-001 are less than de minimus sources and are not normally stack tested when emission factors are available unless a NSPS, NESHAP or MACT standard applies that requires a stack test. EU0150-003 has been tested for lead emissions and is well under the 0.6 tons/yr limit. However, the system has not been operated for years as a direct smelter (converter), and as explained in Permit Condition (EU0080 and EU0150)-002, it will require a new construction permit before being operating in this manner. While operating as EU0150-004 neither NSPS or MACT standards apply and a stack test has not been conducted. The APCP feels that the emission factors and engineering judgement used in estimating the emissions are conservative and that no violation of the 0.6 tons/yr of lead limit will occur. EU(0160 and 0170)-002 will require a stack test, as stated in the permit, if operations ever occur. EU0190-001, is similar to EU0150-004, in that no Federal rules apply and the APCP is confident that the emission calculations correctly indicate there will be no violation of the 0.6 tons of lead per year limit.

The pressure drop ranges for EU0150 and for (EU0160 and EU0170) are in Attachment D, the Baghouse SOP Plan. The pressure drop ranges in (EU0160 and EU0170)-002 and 003 have been removed.

Permit Condition EU0150-004, Emission Limitation (c) has been clearly labeled as "Condition 1."

Comment III.A.2.
Sulfur Dioxide:
Missouri regulations also impose limits on sulfur dioxide emissions specifically for the Herculaneum smelter: 20,000 lbs/hr of sulfur dioxide from the facility. 10 CSR 10-6.260(3)(D)1, Table II. This limit is included in the permit at p. 35 [Permit Condition EU0200-001, Limitation (a)].

Again, neither the regulations nor the draft permit requires Doe Run to monitor sulfur dioxide emissions from the main stack, or from any other emission points at the facility, to determine whether the smelter's actual emissions are within this regulatory limit. Although Missouri regulations authorize DNR to require the submittal of data "to determine whether compliance [with the sulfur dioxide emission limit] is being

met," 10 CSR 10-6.260(3)(D)4, and permit requires Doe Run to "maintain records of any monitoring or control equipment malfunctions," Permit Condition EU0200-001, Record Keeping (f), p. 36, the permit does not actually require Doe Run to conduct any sulfur dioxide monitoring to ensure compliance with the emissions limit in 10 CSR 10-6.260(3)(D)1, Table II.

Because the sulfur dioxide emissions limitation is an hourly standard, compliance with this requirement would best be determined by a continuous emissions monitoring system (CEMS), as the regulations specifically require for secondary lead smelters. 10 CSR 10-6.260(3)(D)3. At a minimum, the Title V permit should specify that compliance monitoring occur at least once per day, when the smelter is operating at peak production for that day, using EPA Method 6 – Determination of Sulfur Dioxide Emissions from Stationary Sources.

In terms of reporting, the permit should require Doe Run to notify the DNR within ten days if any exceedances of the hourly sulfur dioxide emissions limit, and should further require Doe Run to submit all monitoring data to the DNR with the semi-annual reports otherwise required under the permit. These reporting requirements are essential to enable the DNR, and the public, to determine whether Doe Run is operating the Herculaneum smelter in compliance with the emissions limitation specified in the Missouri regulations and Title V permit.

In addition to the fact that Title V law (the Clean Air Act, EPA's and Missouri's implementing regulations, and Title V permit decisions issued by the EPA Administrator) requires the inclusion of monitoring and reporting requirements in the permit, the circumstances in this case are particularly compelling. Notwithstanding the harm that the Doe Run smelter has already caused to the Herculaneum residents and environment, and notwithstanding the frequent complaints of sulfur emissions by Herculaneum residents, Doe Run has only submitted one stack test for sulfur dioxide to the DNR in at least the past five years. Moreover, in response to citizen complaints about Doe Run's sulfur emissions, the company frequently blames episodic conditions, which are neither likely to be documented on a staged, annual test nor evident when an inspector arrives several hours or days after receiving a citizen complaint. Continuous emissions monitoring of sulfur dioxide emissions has long been recognized by the EPA as appropriate, as it has been included for several decades in the NSPS for this industry, 40 CFR § 60.185(2), and is necessary to ensure Doe Run's compliance with the state's sulfur dioxide emission limitation in the face of repeated citizen complaints regarding sulfur emissions.

In addition, that stack test, conducted in December 2004, clearly illustrates the need for more comprehensive monitoring. The December 2004 stack test found an average of 10,982 lbs/hr of sulfur dioxide emissions from the main stack (well below the plant-wide emissions limit of 20,000 lbs/hr). At that emission rate, the sinter plant has a potential to emit 48,101 tons per year of sulfur dioxide if it is operated 24 hrs/day, 365 days/yr (i.e. 8,760 hours/year). According to the December 2004 stack test, however, the sinter plant operated for 5,784 hours in 2004. Assuming that the majority of sulfur dioxide emissions result when the sinter machine is in operation, this implies an emissions rate of 31,759 tpy for 2004 – almost twice the 16,682.03 tpy listed on Doe Run's 2004 Emissions Inventory Questionnaire (EIQ). Because no calculations were included as a part of the 2004 EIQ, the reason for this discrepancy is unclear. At a minimum, this discrepancy illustrates that Doe Run has implicitly disavowed the reliability of its December 2004 stack test (yielding 10,892 lbs/hr) as representative of its sulfur dioxide emissions during 2004. Rather, it seems that the facility's sulfur dioxide emissions rate varies with production and other factors. Clearly, more than an occasional stack test is needed to determine compliance with an hourly sulfur dioxide emission limit.

According to the EPA, sulfur dioxide "contributes to respiratory illness, particularly in children

and the elderly, and aggravates existing heart and lung diseases." Moreover, short-term peak levels are of particular concern:

> High levels of SO2 emitted over a short period, such as a day, can be particularly problematic for people with asthma. EPA encourages communities to learn about the types of industries in their communities and to work with local industrial facilities to address pollution control equipment failures or process upsets that could result in peak levels of SO2.

In the case of Herculaneum, the community has already communicated to DNR its concerns about sulfur dioxide emissions from the lead smelter. In the absence of reliable monitoring data, the community cannot protect itself from excessive sulfur dioxide emissions.

DNR must revise the draft Title V permit to require periodic and compliance monitoring, as outlined above, sufficient to ensure that Doe Run is complying with the facility's hourly limits on sulfur dioxide emissions.

Response to Comment III.A.2. Compliance with 10 CSR 10-6.260(3)(D)1. shall be determined by source testing as specified in 10-6.260(5)(B). (10 CSR 10-6.260(3)(D)2.)

There are sulfur dioxide ambient air monitors in the vicinity of the smelter and there has not been a recorded violation of the NAAQS in the past decade. As you have noted, sulfur dioxide emissions are related to production. The production rates of sinter, of the blast furnace and of the acid plant all determine the SO_2 emission rate. The emission factor in the EIQ is a calculated emission factor from stack test SO_2 emission rates determined in testing on October 8, 20, 21 and 22, 1999. One factor was determined for sinter production and another based upon the amount of lead bearing materials fed to the blast furnaces. As the ratio of tons of sinter produced to tons of lead bearing material charged to the blast furnace varies, the EIQ factor changes. The December 2004 test was done to confirm that the SO_2 emission rate was in compliance with the 10 CSR 10-6.120 limit of 20,000 lbs SO_2/hr. However, the test result cannot be used to determine the annual emissions, since they are a function of the actual activity occurring at the facility. Again, conducting a daily EPA Method 6 stack test is not practical because of the time required for testing, sample analysis and expense. The source is complying with Missouri state rule 10 CSR 10-6.260.

Comment III.A.3
Opacity:

Missouri regulations impose opacity limits applicable to the Doe Run Herculaneum smelter, and the draft Title V permit contains opacity limits. Conditions PW001 and (EU0080 and EU0150-002). As discussed below, the draft permit included in PW001 the less restrictive limits applicable to outstate Missouri, instead of the applicable limits for the St. Louis Metropolitan Area, where the smelter is located.

With respect to opacity monitoring, the permit requires Doe Run to operate a continuous opacity monitoring system ("COMS") with respect to emissions from the sinter machine discharge end, Condition (EU0080 and EU0150)-002, pp. 27-29, because that emission unit was constructed or modified after the NSPS for Primary Lead Smelters took effect and the NSPS requires continuous opacity monitoring. Furthermore, a 1980 Consent Order between Doe Run's predecessor in interest and DNR also requires Doe Run to employ COMS (i.e. transmissometer) for opacity monitoring from "each blast furnace, above feed floor," and "#2 and #3 baghouse outlet trail system." For reasons not explained in the permit or the Statement of Basis, the requirements of the 1980 Consent Order are not included in the draft Title V permit. The permit, or at least the Statement of Basis, should be revised accordingly.

Ideally, continuous opacity monitors (COMS) would be required to show compliance with this limit. Unfortunately, for lead smelter stack sources in the Missouri, 10 CSR 10-6.120(3)(A)1 and 10 CSR 10-6.030(9) specify that compliance is shown using visual observations by EPA Methods 22 and 9. However, any opacity sources other than stacks are governed by the more expansive monitoring requirements of 10 CSR 10-6.220(5)(A), which specifically include COMS. In light of Doe Run's compliance history, and the numerous complaints of visible emissions from the facility's neighbors, the DNR should require COMS for any non-stack sources of opacity.

With respect to reporting, the draft permit should be revised to include the requirement that all COMS-based opacity monitoring results be submitted to DNR on a quarterly basis. See 10 CSR 10-6.220(4)(A).

With respect to opacity from stack sources, the regulations do not specify the frequency with which the requisite visual observations must take place. Therefore, Title V requires DNR to specify periodic and/or compliance monitoring in the permit. In the draft permit, DNR has exercised this authority to specify monitoring on a weekly to monthly basis, depending on compliance status. This monitoring frequency does not satisfy Title V's periodic or compliance monitoring demands because it is not sufficient to assure compliance with the opacity limits in 10 CSR 10-6.220. DNR has taken much of the language of this requirement directly from the section entitled "Visual Observations" in EPA's Region 7 Policy on Periodic Monitoring for Opacity. In the same section, EPA also suggests that "to the extent practicable, a source should attempt to record daily opacity measurements." Given Doe Run's compliance history, as well as the history of citizen complaints, a daily observation frequency is indeed most appropriate. Particularly with the use of Method 22, which is not an extensive or complex procedure, as a screening tool, daily observations would cause no undue hardship to the company.

In addition, the draft permit currently allows Doe Run full discretion to choose the timing of all measurements of opacity related to Permit Condition PW001, as long as the smelter is in operation. The permit should specify that measurements be taken when the installation is not only in operation, but is operating at the maximum rate of production for that day.

Response to Comment III.A.3. The St. Louis Metropolitan version of 10 CSR 10-6.220 is the correct regulation for this installation and it has been placed in the permit.

The 1980 Consent Order was not placed in the permit because by 1997 the sinter plant ventilation scrubbers were all replaced with baghouses, the #2 baghouse was removed and the two transmissometers were removed because they failed to provide accurate opacity readings. The 1980 Consent Order has therefore been superceded as mentioned in the Statement of Basis.

Triboflow leak detectors are used as surrogate indicators of opacity and the detector output is monitored and recorded continuously. The triboflow can detect leaking filter bags before a COMS would detect an opacity increase. The APCP is confident that COMS would not improve the detection of lead emissions from stacks. Missouri state rule 10 CSR 10-6.220(5)(A) does not include the use of COMS for non-stack opacity emissions.

Permit Condition (EU0080 and EU0150)-002 has been changed to include 10 CSR 10-6.220(4)(A).

Permit Condition PW001 has been the opacity standard for most of our operating permits and the APCP feels that the Condition, as written, adequately covers the installation considering the wide use of the triboflow detectors.

Comment III.A.4.(a)
4. Particulate Matter:
(a) Facility-wide issues:
Permit Condition PW002, based on 10 CSR 10-6.170, describes two emissions limits with regard to fugitive particulate matter emissions. The first, as discussed above, requires Doe Run to limit its fugitive particulate matter emissions such that none may be found on surfaces outside of the installation's boundaries. Apart from the problem of ongoing violations of this limit, as discussed above, the draft permit does not even specify how compliance is to be shown. Furthermore, neither the underlying regulations nor the draft permit contain periodic or compliance monitoring to show compliance with this limit. Therefore, the draft permit must be revised to require Doe Run to conduct regular monitoring sufficient to ensure compliance with this limit.

The second limit contained within Permit Condition PW002 requires that no "fugitive particulate matter emissions...remain visible in the ambient air beyond the property line of origin." Once again, the permit does not specify how compliance with this limit is to be shown, aside from generalized references to "inspections of its facilities sufficient to determine compliance with this regulation." This is vague and unenforceable. Furthermore, as with the limits on opacity from stack sources discussed above, the regulations in this case do not specify the frequency with which the requisite inspections must take place. Therefore, Title V requires DNR to specify periodic and/or or compliance monitoring in the permit.

In the draft permit, DNR has exercised this authority to specify monitoring on a weekly to monthly basis, depending on compliance status. This monitoring frequency does not satisfy Title V's periodic or compliance monitoring demands because it is not sufficient to assure compliance with the fugitive particulate matter emissions limits in 10 CSR 10-6.170. Given Doe Run's compliance history, as well as the history of citizen complaints, a daily observation frequency is most appropriate.

In addition, the draft permit currently grants Doe Run unfettered discretion to choose the timing of all measurements of fugitive particulate matter emissions related to Permit Condition PW002. Permit Condition PW002 does not even require that the smelter be in operation at the time of the observation. The permit should specify that measurements be taken when the installation is not only in operation, but is operating at the maximum rate of production for that day.

Response to Comment III.A.4.(a) Permit Condition PW002 (10 CSR 10-6.170) addresses fugitive particulate emissions that go beyond the premises in quantities that the particulate matter can be found on surfaces beyond the property lines or are visible in the ambient air beyond the property line. The installation does not have to be operating. The rule covers construction and demolition activities, the use of roads and open areas, and operations at the installation. The monitoring and record keeping requirements stated in the permit are considered adequate and the APCP does not believe that the recommended changes to PW002 would enhance compliance. However, as stated in response to Comment II.D. recontamination of yards and streets is a serious concern and will be evaluated closely in conjunction with the department's Hazardous Waste Program.

Comment III.A.4.(b (b) Emission unit-specific issues:
• Permit Condition (EU0080 and EU0150)-002 (pp. 27-29), based on federal and Missouri regulations, imposes a particulate matter emissions limit on EU0080. There is no monitoring specified for this limit. The draft permit should be amended to require periodic monitoring to assure compliance with this limit.
• Permit Conditions EU0150-004 (pp. 29-30) and (EU0160 and EU0170)-003 (pp. 31-32), based on previously issued construction permits, impose both time and concentration based particulate matter emission limits on the emission units covered by those provisions. Although the draft permit requires

baghouse pressure drop monitoring and associated recordkeeping and reporting for all of these emissions units, it does not require initial performance testing for particulate matter or periodic monitoring of actual emissions to ensure that, even when the baghouses are functioning properly, the emission limits are being achieved. The draft permit should be revised to require initial and periodic emissions testing in addition to baghouse pressure drop monitoring, and should specify the testing methods to be those listed in 10 CSR 10.6030(5) (10 CSR 10-6.400(5)). Furthermore, the following changes should be made to individual permit conditions:
- For Permit Condition EU0150-004, the draft permit should specify a range within which the baghouse pressure drop must be maintained. This range should be consistent with the Low alpha baghouse "Normal Baghouse Differential Pressure Operating Range" of 4"-14" listed on pp. 76.
- For Permit Condition (EU0160 and EU0170)-003, the disparity between the baghouse pressure drop listed on pp. 32 (2"-10" water column) and those described as the "Normal Baghouse Differential Pressure Operating Range" on pp. 76 (3"-14") should be clarified. The underlying construction permit requires the baghouse pressure drop to be "maintained with the design conditions specified by the manufacturer's performance warranty." (See Construction Permit No. 092001-012)

Response to Comment III.A.4.(b) The NSPS 40 CFR part 60, subpart R is applicable to EU0080. The regulation requires initial testing to demonstrate compliance, but does not require periodic testing. Measurement of the baghouse pressure drop and proper operation of the COMS and the particulate relative flow device provide adequate monitoring for this emission unit. The APCP believes that initial and periodic testing for EU0150-004 and (EU0160 and EU0170)-003 are not necessary as the use of emission factors indicate that the units will be well within the emission limits. The permit will not be changed by these comments.

The baghouse pressure drops have been removed from the Permit Conditions and all are listed in the Baghouse SOP

Comment III.B.
Compliance assurance monitoring:

EPA regulations require certain Title V facilities to develop a compliance assurance monitoring ("CAM") plan, according to detailed requirements set forth in the regulations, and to submit the plan to the DNR for review and approval. 40 CFR Part 64.

The draft Doe Run title V permit concedes that the Herculaneum smelter is subject to CAM, but states that Doe Run will not have to comply with the CAM requirements until its Title V permit, once issued, is later revised – possibly not for at least another five years. SB-4. The stated reason for this enormous delay is that Doe Run submitted its initial Title V permit application prior to April 20, 1998, the trigger date in the EPA regulations. 40 CFR § 64.5(a). This ignores the permit application history in this case. Although Doe Run initially submitted a Title V application in 1997, it submitted substantially revised applications in 1999 and again in 2004 – both clearly after April 20, 1998. The 1999 and 2004 revisions address significant facility modifications and newly-applicable emissions limits (e.g. MACT regulations for primary lead smelters) that were not addressed in the 1997 submission. When asked in 2003 about the status of Doe Run's Title V permit application, DNR's permit writer responded:
"The application is assigned to me, but I haven't a clue as to when they will furnish a new or at least a revised application. They have made some enormous changes to the installation and work procedures since the 1997 application was submitted."

It is plain that the DNR's permitting decision was based on the 1999 and 2004 application, and not on outdated, insufficient, 1997 submission. Accordingly, Doe Run is currently subject to CAM requirements and the Title V permit must be revised to require the submittal to DNR for review and approval, and implementation, of a compliance assurance monitoring program in compliance with 40 CFR Part 64.

Response to Comment III.B.

CAM Rule § 64.5 Deadlines for submittals.

(a) *Large pollutant-specific emissions units.* The permittee of a major source shall submit the information required under § 64.4 at the following times:

(1) On or after April 20, 1998, the permittee shall submit information as part of an application for an initial part 70 or part 71 permit if, by that date, the application either:

(i) Has not been filed; or

(ii) Has not yet been determined to be complete by the permitting authority.

The application for the Doe Run Herculaneum smelter was filed May 12, 1997 and was determined to be complete on November 26, 1997. Therefore, the information required by 40 CFR part 64 is not required until permit renewal or the submittal of a significant permit revision, but then only with respect to those pollutant-specific emissions units for which the proposed permit revision is applicable. There were no changes made to the draft permit based on this comment

The response has also been placed in the Statement of Basis of the permit.

Comment IV Insufficient Reporting Requirements

Title V requires a permittee to submit reports to DNR to enable DNR, as well as the public, to determine whether the permittee is complying with applicable permit requirements. 10 CSR 10-6.065(6)(C)1.C(III) and 10-6.065(6)(C)3.A. The key data to be reported are based on actual monitoring of the facility's emissions. Insofar as the draft Title V permit for the Doe Run Herculaneum smelter lacks sufficient monitoring requirements, as outlined above, it is correspondingly deficient in reporting requirements.

If the draft permit is revised to incorporate monitoring requirements where non current exist, or existing requirements are inadequate, the data obtained by such monitoring should be reflected in Doe Run's semi-annual reports required under the General Permit Requirements (pp. 47-48). However, this will not, by itself, correct the reporting deficiencies in the draft permit.

First, the provision under General Permit Requirements for semi-annual reports is ambiguous as to the content of the reports. Must they contain all required monitoring data, as suggested in paragraph II.A, or just deviations from emissions, monitoring, and other requirements, as suggested in paragraph II.B? If the latter, then the semi-annual report is wholly inadequate to enable the public to determine whether Doe Run is indeed complying with its permit. Whereas DNR inspectors have the option of reviewing Doe Run's monitoring records during an on-site inspection, the public is limited to reviewing whatever records are actually obtained by DNR. If Doe Run has the option of deciding which of its monitoring results are "deviations" that require reporting, then the permit is impermissibly relying on "self-enforcement." That has proven to be woefully inadequate in the case of this facility, and should not be perpetuated in the Title V permit. Inasmuch as a key purpose of the Title V permit is to enhance compliance with the requirements of the Clean Air Act, then the reporting requirements should be sufficiently extensive that both DNR and the public can readily evaluate Doe Run's actual emissions and compare them with the applicable permit limits. Thus, the draft Title V permit should be revised to make clear that, in addition to reporting on "deviations," Doe Run's semi-annual reports must include copies of all monitoring data

obtained pursuant to the permit's monitoring requirements. Electronic reporting should ease any paperwork burdens that might otherwise be associated with such a requirement.

Second, the permit should be revised to require prompt reporting of any exceedances of the daily lead emissions limitations and hourly sulfur dioxide emissions limitation referenced in the monitoring section above.

Response to Comment IV

The semi-annual reports follow General Permit Requirements II.B. This has been the procedure for all of the Title V permits and the condition will not be changed in the permit. Determination of daily lead emissions and hourly sulfur dioxide emissions, as suggested, are not practical.

Comment V. Erroneous Permit Conditions

V.A. Opacity – wrong limit

The draft permit contains a plant wide limit on visible emissions, also referred to as opacity, based on state regulations. PW001, p. 7; 10 CSR 10-6.220. The regulations contain several different opacity limits based on the location of the facility within the state of Missouri, and the draft permit does not use the limits specifically applicable to this region. The draft permit specifies a limit of 40% opacity for any sources existing as of February 24, 1971 ("existing sources"), and 20% opacity for sources constructed or modified after that time ("new sources"). An exception is provided for up to 60% opacity for any six minute-period per hour. However, under Missouri regulations those opacity limits apply to the region defined as "outstate Missouri," not to the region defined as the St. Louis Metropolitan Area, which specifically includes Jefferson County. 10 CSR 10-6.020(2)(S)18. The correct limits prescribed in the regulations for the St Louis Metropolitan Area are appreciably lower than those in the draft permit – 20% opacity for both existing and new sources, with an exception for up to 40% opacity for any six-minute period per hour. 10 CSR 10-6.220 (3)(A) and (B).23 The draft permit must be revised to specify the correct opacity limits.

Response to Comment V.A. As stated in Response to Comment III.A.3., the APCP agrees with the comment and PW001 has been corrected.

Comment V.B. Sulfur Dioxide – limit needs to be plant-wide, not just for acid plant

As already noted, Missouri regulations impose a plant-wide limit on Doe Run's sulfur dioxide emissions of 20,000 lbs/hr. 10 CSR 10-6.260(3)(D)1, Table II. While the Statement of Basis refers to this limit as a "Plant Wide Limit" (SB-6), and the permit states that the 20,000 lbs/hour limit applies to "emissions from the smelter installation" (Draft Permit, 35), the limit is placed within the permit as specific to EU0200, the acid plant. Although the acid plant is eventually vented through the main stack, the 20,000 lbs/hr sulfur dioxide emissions limit is clearly a plantwide emission limitation, and it should be presented as such in the Title V permit.

Response to Comment V.B. The APCP agrees that it is a plant wide limit. As the SO_2 emissions are largely from the main stack, it seemed acceptable to present them as a specific source. However, in response to this comment, the permit has been changed to include the emissions as plant wide in Permit Condition PW006.

Comment V.C. Determination of Applicability – 10 CSR 10-6.400

In the Statement of Basis, DNR claims that 10 CSR 10-6.400 is not applicable to EU0010–EU0140 because, "in the event other rules apply to particulate matter emissions units, the more stringent rules apply" (SB-4). Later, DNR states that 10 CSR 10-6.120 and 40 CFR Part 63, Subpart TTT are the

aforementioned "more stringent rules" (SB-6). However, 10 CSR 10-6.400 places limits on particulate matter emissions, whereas 10 CSR 10-6.120 and 40 CFR Part 63, Subpart TTT place limits on lead emissions from the smelter. Lead and particulate matter, though related quantities, are not the same, and limits on one may not be substituted for limits on the other. The draft permit should be revised to include applicable particulate matter emissions limits, including associated periodic and/or compliance monitoring, recordkeeping, and reporting requirements, for EU0010 – EU0140.

Response to Comment V.C. The APCP agrees with the comment, the Permit Conditions and the Statement of Basis have been corrected.

Comment V.D.1.
Missouri regulations also define "existing source" differently for the St. Louis Metropolitan Area than for outstate Missouri. Sources existing on March 24, 1967 are regulated as existing sources in the St. Louis area, with sources built or modified thereafter considered new. The permit erroneously contains the cutoff date of February 24, 1971, which applies to outstate Missouri. 10 CSR 10-6.020(2)(E)13. The correct opacity limit in this case, however, is the same for both new and existing sources.

Response to V.D.1. The APCP agrees with the comment. The permit has been corrected.

Comment V.D.2.
For instance, the report done to test Baghouse Stacks 7-9 reported on both lead and particulate matter emissions from each of these baghouse stacks. In each case, the particulate matter emissions exceeded the lead emissions considerably. See excerpts from Air Quality Test Report: EPA Compliance Test for Particulate Matter and Lead Emissions, Test Date(s) December 3-5, 2002.

Response to V.D.2. The APCP agrees with comment. The permit has been corrected.

Comment V.D.3.
In the Installation Description and Equipment Listing, EP199B Plantwide Resuspension is listed under "Emission Units Without Limitations." Later, on p. 32, this emission point is correctly listed under EU0190 Plant Fugitive Dust, and hence is included under Permit Condition EU0180-001. EP 199B Plantwide Resuspension should be listed under "Emission Units With Limitations" as a part of EU0180 Plant Fugitive Dust.

Response to Comment V.D.3. The APCP agrees with the comment. The Plant Wide Resuspension in EU180 should be identified as EP199B. The permit has been corrected.

Comment V.E.
Work Practice Manual
The Work Practice Manual included as Attachment I is missing Appendices E and F. In addition, sections of it are clearly out of date. For example, it mentions equipment that "will be installed in 1991" (pp. 84). The draft permit should be revised to reflect the current operating conditions at the smelter.

Response to Comment V.E.
As stated on page 2 of Attachment I, Appendix E is the plant layout with water/sweeper truck routes and Appendix F is the plant fence line. Neither of these could be copied in a legible manner. Their absence has been duly noted on page 2 of Appendix I.

Comment VI.
Insufficient Data Regarding Doe Run's Emissions to Support Compliance or Applicability Determinations Underlying Permit
The draft permit uses Doe Run's reported emissions to determine (1) the applicability of some laws and regulations and (2) Doe Run's current compliance with those laws. These reported emissions are derived from Doe Run's annual Emissions Inventory Questionnaires (EIQs). In some cases, however, these reported emissions are impossible to confirm because Doe Run has been submitting inadequate and incomplete EIQs to DNR. Without this information, DNR cannot confidently rely on Doe Run's reported emissions to determine the applicability of federal and state requirements or Doe Run's compliance therewith.

EIQs give a record of emissions by emission point. Each emission point and the pollutants it emits are described on an individual Form 2.0. If separate calculations are used to support the conclusions listed on the Form 2.0s, then those calculations should be included on the appropriate forms. Doe Run has not submitted any of the relevant calculations since their 2001 EIQ, which primarily excerpted sections of Doe Run's Lead Emissions Inventory dated March 30, 2000. Even then, the calculations submitted were not on the correct forms, are hard to decipher, and referenced relevant information not included with the EIQ.

Response to Comment VI. The Lead Emissions Inventory dated March 30, 2000 is still the appropriate basis for most of the emission factors in the EIQ. A large number of man hours went into the development of this study and it was accepted by the APCP and the EPA and is still considered adequate for purposes of developing the operating permit. If in the development of the new lead SIP it is found that corrections to the emission factors are required, they will be corrected.

VI. Tanks
Form 2.5 (Organic Liquid Storage – Fixed Roof Tank)

Form 2.5 (Organic Liquid Storage – Fixed Roof Tank) is "required if a facility wants to calculate its own breathing and working loss emission factors" for fixed roof organic liquid storage tanks with capacities greater than 250 gallons.26 According to the draft permit, Doe Run's 4 eligible storage tanks (EP043, EP044, EP045, and EP049) have capacities greater than 250 gallons. The EIQs indicate that the equations in AP-42 were used to derive the emissions given in the EIQs; however, no Form 2.5s have been submitted to illustrate these calculations.

Response to Comment VI. Tanks The emission factors for the breathing and working losses are not calculated from the AP-42 formulas, but are taken from EPA's Factor Information Retrieval Data System (FIRE) that contains EPA's recommended emission estimation factors. The AP-42 box in the EIQ is normally checked if either AP-42 or FIRE is the source of the emission factor. EIQ Forms 2.5 are not necessary when using FIRE.

VI. Storage Piles *Form 2.8 (Storage Pile Worksheet)*
Form 2.8 is used to report emissions from any storage piles. In the 2004 EIQ, EP001-A, EP001-B, EP050, EP051, EP055, EP055B, EP056, EP056B, EP057, EP057B, EP058, EP060, EP061, EP062, EP065, and EP199B all appear to be related to storage piles and emissions from loading/unloading. These are all covered under EU0180 in the draft permit. Despite the prevalence of these emissions points, Doe Run has declined to include any Form 2.8s in their most recent EIQs, making it impossible to determine the accuracy of their reported emissions from storage piles.

Response to Comment VI. Storage Piles The emission factors are from the Herculaneum lead emission inventory of 3/30/2000. The loading and unloading emissions are calculated by applying the EF to the tons involved for the year as shown on the appropriate Form 2.0 pages. Emissions from each type of storage pile and each haul road were calculated for October 1998 through April 1999. The emissions were reduced to a yearly value and have been used as constant values since the 2000 EIQ.

VI. Stack Tests
Form 2.9 (Stack Test/Continuous Emissions Monitoring Worksheet)

According to Doe Run's 2004 EIQ, the emissions factor of at least one pollutant from emissions points EP015B, EP019D, EP019E, EP029-36, EP039-40, EP059, and EP060 is derived from a stack test. When a company uses a stack test to determine an emissions factor, they are required to fill out Form 2.9 (Stack Test/Continuous Emissions Monitoring Worksheet). Doe Run has not submitted any Form 2.9s. DNR has some, but not all, of the stack tests that were used for these calculations, making it theoretically possible for them to re-create Doe Run's calculations of the emissions factors. Without Doe Run's annual submission of the correct forms, however, it is impossible to say whether their reported emissions are accurate.

For example, the vast majority of Doe Run's SOx emissions are listed under EP059, with the source of the emissions factor listed as a stack test. In this case, DNR has a copy of the stack test, done in December 2004, used to determine the emissions factor. However, the emissions factor listed on the EIQ (40.956 lbs/unit, where a unit is a ton of lead bearing material and sinter produced) does not appear in any obvious spot in the December 2004 stack test report. The only number that closely resembles this is the average Corrected Sample Volume, 40.95 dscf. This quantity is not an emissions factor, and it would be a significant error if it were indeed the source of the emissions factor listed on the EIQ.

There are calculations for this emissions factor included with the 2001 EIQ; however, these calculations reference a stack test supposedly done on October 20-21, 1999. In response to a Sunshine Act request, DNR reported that it did not have this stack test. Without this stack test or at least summary data from it, these calculations are impossible to verify or replicate. Recognition of this exact problem is likely why DNR requests that the relevant pages of any stack test report be included with Form 2.9. The combination of these missing forms and stack tests means that DNR has had no means of verifying even Doe Run's calculated yearly SOx emissions since at least 1999.

In addition, for the past six years, Doe Run has reported to the DNR its nitrogen oxides (NOx) emissions based on a stack test purportedly conducted in 1999. As with the SO2 stack test, DNR has been unable to locate these results, and none of the EIQs include information necessary to support or verify the cited emissions factor. This stack test makes an enormous difference in Doe Run's reported NOx emissions. Before this stack test, Doe Run reported NOx emissions, based on AP-42, in the range of 300-400 tons per year. After this stack test, Doe Run began reporting NOx emissions in the range of 20-40 tons per year. For DNR to accept this drastic change based on an emissions factor developed from a one-time test is questionable enough; to do so without any verification is unacceptable. Indeed, numerous construction permits issued by Doe Run to DNR – including one issued in 2000, after the 1999 stack test – refer to this facility as a major source of nitrogen oxides (as well as sulfur oxides and lead). See, e.g., Construction Permits 2000-07-061 (p.4), 1999-07-005, 1999-05-137, 1998-08-037. The draft Title V permit, however, refers to Doe Run as a major source of only lead and sulfur dioxide. In the Statement of Basis (SB-1), the DNR asserts without any explanation that Doe Run emits less than 100 tons per year of NOx. The Title V program requires DNR to explain, and substantiate, any significant change in regulatory status that is not

apparent from public records. That is not been done with respect to NOx emissions. Given that NOx is a precursor to ozone, and the Doe Run smelter is within an ozone nonattainment area, this omission is particularly glaring.

Response to Comment VI. Stack Tests Emission points EP015B, EP019D, and EP019E are factors derived from the stack tests of baghouse #7, #8, and #9 conducted on December 3 – 5, 2002. Emission points EP029-36, EP039-40, EP059, and EP060 are factors from the Lead Emission Inventory dated March 30, 2000. These emission factors are a combination of stack test results and prorating of the factors based on production levels from the involved emission units. The SO_x EF for EP059 is explained in Response to Comment III.A.2.

Prior to 1999 Doe Run Herculaneum reported NOx emissions from the blast furnaces and sinter plant by using the NOx emission factor for coke burning in boilers from EPA's Factor Information Retrieval (FIRE) System for Criteria Air Pollutants times the tons of coke burned. The NOx from natural gas combustion was added to the blast furnace values resulting in NOx emissions of 434 tons of NOx for 1998. NOx emissions from the main stack during a three run test on 10/7/99 showed an average of 2.853 lb NOx/hr. The sum of sinter produced and material charged to the furnaces was 169.4 tons/hr. The emission factor of 0.0176 lb NOx/ton sinter produced and furnace charge was used starting with the 1999 EIQ. A probable reason for the large difference in NOx formation is that the boiler combustion temperature is much higher than that in the sinter plant and blast furnace. Please note that the NOx emissions referred to in Construction Permit 2000-07-061 was from 1998.

At the time of the mentioned Sunshine Act request, neither the SO_2 nor the NO_x tests were located at the APCP. Copies of the test results were then requested from the installation and were received in August, 2005. The test results were then furnished to the requestor.

VI. Forms

Use of Outdated Forms

DNR has updated the EIQ forms several times since 1996. However, Doe Run continues to submit EIQs on forms that are dated December 1996. This is expressly against DNR's instructions, which clearly request, "since there have been minor changes on some forms, please do not use any forms from previous years." Similarly, Doe Run submitted their June 2004 Title V application on forms from 1996, despite revisions to these forms in the time since their first submittal of an application. The use of these forms, which are almost a decade out of date, makes it unclear whether Doe Run is complying with the most recent regulations or not.

A final example of the carelessness with which Doe Run's EIQs are executed comes from their recently submitted 2004 EIQ. EIQs require the submittal of process flow diagrams. The process flow diagram included in Doe Run's 2004 EIQ is not even a diagram of Doe Run's smelter – it describes the St. Joseph Light & Power Company in St. Joseph, MO.

These examples do not provide an exhaustive list of defects in Doe Run's recent EIQs. They clearly illustrate, however, that recent EIQs are inadequate for determination of the either the applicability of relevant laws and regulations or Doe Run's compliance with those laws. In addition, the overwhelming shortcomings of these EIQs further exemplify the compelling need for comprehensive monitoring and reporting of Doe Run's actual emissions.

Response to Comment VI. Forms The operating permit identifies the current rules and regulations applicable to an installation at the time the permit is issued. Section II. Plant Wide Emission

Limitations, Section III. Emission Unit Specific Emission Limitations, and Section IV. Core Permit Requirements all state that the installation shall comply with each of the following emission limitations listed, and that the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) should be consulted for the full text of the applicable requirements. The installation is held responsible for complying with the most recent regulations whether their forms are current or not.

The contractor that prepares the smelter installation's EIQ provides this service to numerous clients. The incorrect process flow sheet was probably mistakenly provided by a contractor employee and was not noticed by the installation.

Comment VII.A.
Failure to State Clearly Doe Run's Air Pollution Obligations
Numerous Provisions of the Permit Are Not Practically Enforceable

Comment VII.A.(a)
A Title V permit must not only contain all applicable requirements; it must be sufficiently clear and specific to ensure that those requirements are enforceable as a practical matter. As quoted recently by the EPA Administrator, the requirement of "practical enforceability" can be described as follows:

> A permit is enforceable as a practical matter (or practically enforceable) if permit conditions establish a clear legal obligation for the source [and] allow compliance to be verified. Providing the source with clear information goes beyond identifying the applicable requirement. It is also important that permit conditions be unambiguous and do not contain language which may intentionally or unintentionally prevent enforcement.

Several provisions of the draft Doe Run-Herculaneum Title V permit are not practically enforceable, and must be revised.

(1) Plant Wide Permit Condition PW001 (p. 7) prohibits the omission of visible air contaminants (opacity) in excess of certain limits. The recordkeeping portion of this condition directs Doe Run to record "whether the visible emissions were normal for the process." First, the term "normal" is not defined and is vague and unenforceable. Second, this information seems wholly irrelevant. Is DNR implicitly suggesting that if Doe Run's normal operations included frequent violations of the opacity limitations, then the "normality" of the violation would somehow excuse it?
In addition, this condition requires Doe Run to conduct opacity readings "on this emission unit." Given that PW001 is a plant-wide provision, this language is ambiguous and, at best, difficult to enforce.
Moreover, the condition requires Doe Run to conduct a Method 9 observation only for "emission units with visible emissions perceived or believed to exceed the applicable opacity standard." This language is inherently vague and unenforceable, and leaves Doe Run with virtually unfettered discretion to decide when – if ever – to invoke Method 9 to monitor opacity.

(2) Plant Wide Permit Condition PW002 (p. 8) prohibits fugitive particulate matter emissions beyond the property line if (a) on surfaces or (b) visible in ambient air. It further states: "The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director." Although the quoted language is copied from a SIP-approved state regulation, 10 CSR 10-6.170, it does not satisfy the enforceability requirements of Title V. Doe Run's substantial point source and fugitive emissions have resulted in excessive levels of particulate matter on the streets and yards of Herculaneum. Notwithstanding the fugitive control measures that Doe Run has adopted in the past few years, the EPA

and DNR continue to report high levels of lead dust on Herculaneum's roads in the vicinity of the smelter, and increasing levels of lead in residential yards. It is likely that at least some of the lead and lead dust in question is fugitive particulate matter from the facility, while some is likely from stack emissions. This permit provision is not practically enforceable because without knowing in advance what method will be employed to determine the nature or origin of the particulate matter, it will be extremely difficult if not impossible for DNR to prove that Doe Run is in violation of this provision. Moreover, the standard by which a technique will be approved is vague and ambiguous.

These problems are compounded by the "Monitoring" portion of the permit condition, which directs Doe Run to "conduct inspections of its facilities sufficient to determine compliance with this regulation." As mentioned above, the permit must specify the monitoring method, and cannot leave it to the discretion of the permittee to determine what sort of self-inspection is "sufficient to determine compliance."

In addition, the "Recordkeeping" portion of the permit condition directs Doe Run to record "whether the visible emissions were normal for the installation." First, the term "normal" is not defined and is vague and unenforceable. Second, this information seems wholly irrelevant. Is DNR implicitly suggesting that if Doe Run's normal operations included frequent violations of the regulation prohibiting visible emissions beyond the facility, then observations of visible emissions would be excused?

The Recordkeeping portion of PW002 also directs Doe Run to record "equipment malfunctions that could cause an exceedance of 10 CSR 10-6.170." The phrase "that could cause an exceedance" is vague and ambiguous. Given the actual conditions in the community, it is extremely important to the public health of the community that Permit Condition PW002 be enforceable. As currently drafted, it is not. Therefore, DNR must revise Condition PW002:
• to specify the technique(s) to be used to determine the nature or origin of particulate matter for purposes of determining whether fugitive particulate matter from the source is found on surfaces or in the air beyond the facility;
• to specify how inspections must be conducted to ensure that Doe Run is complying with 10 CSR 10-6.170;
• to eliminate the requirement to record whether visible emissions were "normal" for the installation; and
• to eliminate the phrase "that could cause an exceedance..." from the Recordkeeping language regarding malfunctions.

Response to Comment VII.A.(a) Permit Conditions PW001 and PW002 are in virtually all operating permits, are understood and have been enforceable. The technique to be used to determine the nature or origin of the particulate matter depends upon the activities of the suspect source. The inspections are conducted by making visual observations. The descriptive columns are to assist the observers in recording their observations. The attachments are required as proof that the installation made the required observations when they certify to compliance with those regulations. The APCP has not changed the permit based on this comment. However, once again, as stated in response to previous comments, the APCP recognizes the continuing problems related to lead in street and soil samples and is working cooperatively with the department's Hazardous Waste Program to evaluate the most appropriate course of action.

Comment VII.A.(b)
PW004 addresses startup, shutdown, and malfunction. Condition (b)(1) (p. 10) directs Doe Run to minimize its emissions during those times "consistent with safety and good air pollution control practices." Although the language is quoted from the EPA's MACT regulations, without more it is not practically enforceable. The phrase "consistent with..." is not defined, and is sufficiently vague and

ambiguous that it gives Doe Run ample opportunity to violate MACT limits during periods of startup, shutdown, and malfunction with relative impunity. The fact that, four years after the deadline has passed, Doe Run has still not developed a Startup, Shutdown, and Malfunction Plan pursuant to the MACT regulations only highlights the need for more precise and enforceable permit language.

Moreover, condition (f) (p. 11) limits Doe Run's reporting duties in the case of startups, shutdowns, and malfunctions to situations where the activity was both inconsistent with the facility's SSMP (which, as noted above, Doe Run has yet to produce) and resulted in an exceedance of the applicable emission limitation. Given that Doe Run is currently required to test its stack emissions only once every other year to determine compliance with its MACT limits, this reporting requirement is not enforceable as drafted. See *In the Matter of Midwest Generation, LCC, Fisk Generating Station,* Permit number V-2004-1; CAAPP No. 95090081, Decision of then-Acting EPA Administrator Stephen L. Johnson (March 25, 2005), 2005 EPA CAA Title V LEXIS 4.
The draft permit should be revised in accordance with the aforementioned comments.

Response to Comment VII.A.(b) A Compliance Plan for the SSMP has been added to the permit and the APCP believes that Permit Condition PW004 is acceptable as written. See Response to Comment II.C.

Comment VII.A.(c)
Manufacturers' specifications: In numerous provisions of the draft permit, Doe Run is directed to conduct an activity in accordance with the manufacturers' specifications. In no case does the permit articulate which specifications are being referenced. See, for example, Permit Conditions:
- (EU0010 through EY0170)-001 – Monitoring Requirements (d), (e)4, (h), (i)2(ii)
- (EU0160 and EU0170)-002 – Monitoring (a)
- (EU0160 and EU0170)-003 – Monitoring (a)
- PW006-001 – Operational Limitation/Equipment Specifications (a) and (b)
- EU0190-001 – Equipment and Operation Limitation (a)

As the EPA said with respect to another MDNR Title V permit for a different Doe Run facility:
EPA agrees with Petitioner that manufacturer's specifications, alone, are not sufficient periodic monitoring to assure that a baghouse is properly maintained and operated. Most manufacturer's specifications are intended to be general guidelines and are frequently updated to improve operator and equipment performance as time goes on. While certain key elements from the specifications document could serve as the basis for useful periodic monitoring, EPA does not recommend that the specification manual itself be incorporated by reference into a title V permit.
The permit must contain more explicit monitoring requirements to assure ongoing operation and maintenance of the baghouse.

Response to Comment VII.A.(c)
(EU0010 through EU0170)-001-Monitoring Requirements (d), (e)4, (h), and (i)2.(i).
(d) refers to the standard operating manual for baghouses, aka the Baghouse SOP, Attachment D;

(e)4, and (h). Manufacturer's specifications are correct usage when referring to a condition that currently is not applicable but might be in the future. All of the detectors listed in the permit are triboelectric, and HEPA are not currently used;

(i)2.(i). Again manufacturer's specifications are correct when referring to calibration of an unspecified flow rate monitor.

Comment VII.A.(d)
Risk Management Plans Under Section 112(r) – under General Permit Requirements (p. 48):
The permit states that Doe Run must comply with the EPA regulations implementing section 112(r). It also states that, if Doe Run has more than a threshold quantity of a regulated substance in process, it shall submit a risk management plan by specified deadlines.
Section 112(r) requires companies handling certain harmful substances to take various steps to prevent accidental releases and to minimize the consequences of any such releases. This provision is potentially of great significance to the resident of Herculaneum, who live in close proximity to the Doe Run smelter. The permit leaves the community guessing as to whether Doe Run is currently subject to, and if so complying with, this requirement. This does not meet the basic requirements of a Title V permit. As the EPA stated in the Doe Run-Buick case cited above:

> Material incorporated into a permit by reference must be specific enough to define how the applicable requirement applies, and the referenced material should be unambiguous in how it applies to the permitted facility.

Response to Comment VII.A.(d) The APCP agrees with the comment. Doe Run Herculaneum is not subject to the Risk Management Plan. This has been added to the Statement of Basis.

Comment VII.B.
Statement of Basis lacks required explanation
The Statement of Basis appended to the draft Title V Doe Run Herculaneum permit is cryptic at best, unclear at worst, and fails to explain many of the regulatory decisions reflected in the permit.

Comment VII.B.(a)
The draft permit provides an inadequate picture of Doe Run's compliance history with regard to lead emissions. For instance, as discussed above, the stack test done in April 2002 is listed as "result rejected; non representative" in the Statement of Basis. The result of this stack test was indeed non-representative in that it was done when the smelter production was at 66% of the annual production average. However, the Statement of Basis fails to mention that despite being at two-thirds of production capacity, the result from this test exceeded the MACT standard. In fact, on May 15, 2003, DNR issued a Notice of Violation (NOV) on the basis of this test. According to DNR, this NOV was not rescinded and still stands.

Response to Comment VII.B.(a) The subject MACT test was done on April 18,2002 and the results were submitted to the APCP on December 9, 2002. The test report was deficient in that the process rates were not reported. On April 18,2003 the required additional information was received. On April 23, 2003 guidance was requested from EPA Region VII on whether to use the average of the sinter plant and blast furnace hours or the largest operating hours of either unit. If the average hours were used, the test showed the installation was in compliance. If the larger number of hours was used the test showed noncompliance with the Mact standard. Also, the unit only operated at 66 percent of the prior year's average rate. The EPA confirmed that the largest number of operating hours for either unit should be used, not an average, and a retest should be required at a representative level of operation. A NOV was issued on May 15, 2003 and is listed in the Statement of Basis. The original APCP comments on this test were "result rejected; non representative".

Comment VII.B.(b)
In addition to the omission, the Statement of Basis includes incorrect information with regard to stack tests completed to show compliance with 10 CSR 10-6.120. The result of 553 lb Pb/24 hr, listed for the Main Stack for December 5, 2002, was actually from a test done in April 2002. There was no stack test done in December 2002, only the baghouse tests. Additionally, there was a test done in January 2003,

with a result for the Main Stack of 17.246 lb Pb/hr, or 413.9 lb Pb/24 hr. The January 2003 result, which was inexplicably omitted from the Statement of Basis, is significantly higher than three of the other tests, and illustrates that the result of 553 lb Pb/24 hr is not merely an anomaly.

Response to Comment VII.B.(b) The test data table for 10 CSR 10-6.120 has been corrected.

Comment VII.B.(c)
Testing was performed on the Low Alpha Lead Process on June 17, 1999. The results are given on SB-7 as 0.0014 gr/dscf, and this appears to be a test for particulate matter. However, the result of 0.0014 gr/dscf was in fact a measurement of lead, not particulate matter. As mentioned above, lead and particulate matter are not the same, and limits for one cannot be conflated with limits for the other. Fortunately, in this case it does not matter, as the Low Alpha Lead Process is not actually subject to the particulate matter limits imposed by 40 CFR Part 60, Subpart R, but rather only to the sulfur dioxide limits.

Response to Comment VII.B.(c) The table for subpart R test results has been corrected.

Comment VII.B.(d)
Further more, in determining the applicability of 10 CSR 10-5.510, the Statement of Basis (SB-1) states, "the potential to emit nitrogen oxides is less than 100 tons per year." This conclusory statement, unsupported by any calculation of the facility's potential emissions, is apparently flawed. As discussed above, Doe Run for years reported NOx emissions in the range of 300-400 tons per year. If Doe Run no longer has the potential to emit more than 100 tons per year, then an amount, explanation and proof of this fact must be provided. Without this information, Doe Run's own submissions require the DNR to conclude that 10 CSR 10-5.510 does, in fact, apply to Doe Run.

Response to Comment VII.B.(d) See Response to Comment VI. Stack Tests

Comment VIII.
Conclusion
For the reasons set forth above, the DNR must substantially revise the draft Title V permit. Commenters respectfully request a copy of the DNR's response to comments regarding the draft permit

If the DNR proposes to issue the final draft without correcting the defects identified above, then the EPA should object to its issuance.

Response to Comment VIII. Any revisions to the permit are noted in the Response to Comments. The persons that made comments will be sent a copy of the response to comments memo and a copy of the final draft permit.

Ms. Stacy J. Stotts's Comments

On behalf of the Doe Run Company ("Doe Run"), I am submitting the following comments on the draft Title V Permit drafted by the Missouri Department of Natural Resource's ("MDNR") Air Pollution Control Program for Doe Run's Herculaneum Primary Lead Smelter. This letter will also respond to comments made at the public hearing on the draft permit that was held in Herculaneum on May 26, 2005.

Comment 1. Permit Condition PWOO1 .Emission Limits for Opacity
Maxine Lipelis from the Environmental Law Clinic at Washington University School of Law stated at the public hearing that she believed that the opacity emissions limit for the Herculaneum plant should be 20% instead of the 40% limit contained in the draft permit. Doe Run believes that the opacity standard provided in the permit by the MDNR is the correct standard and should not be adjusted.

Response to Comment 1. The opacity standards in the original draft permit were for the Outstate Area and are incorrect for the Herculaneum smelter. This has been corrected in the current draft permit

Comment 2. Permit Condition PW006-001 .Electrostatic Precipitator (ESP) Monitoring
The draft permit states that the ESP inlet and outlet temperature reading are monitored in the Sinter Plant control room. However, the Sinter Plant has a temperature reading on the inlet only. Therefore, the reference to the outlet temperature reading should be removed. In addition, provisions (c) (d) and (e) in this section contain other monitoring requirements related to the ESP. Unlike at other facilities, such as electric utilities, the ESP at the Herculaneum smelter does not discharge directly to the environment. Instead, the ESP emissions are either directed to the #3 baghouse or the scrubbers in the acid plant. Consequently, these monitoring requirements are not appropriate for this application and Doe Runs asks that they be removed in the final permit.

Response to Comment 2. The reference to the ESP outlet temperature has been removed from the permit. The APCP believes that the performance of the ESP is important in controlling the particulate load on the acid plant scrubbers, therefore, the monitoring requirements of sections (c), (d) and (e) will not be removed from the permit.

Comment 3.(a) Compliance Schedule
First Quarter 2005 NAAQS Exceedance
Ms. Lipelis stated at the public hearing that she believed that MDNR should include in the final Title V permit a compliance schedule to address the first quarter exceedance of the lead NAAQS that was recorded at the monitoring station located next to the Doe Run Herculaneum facility. 40 C.F.R. § *70.5(c)(8)(iii)(c)* provides that, if a facility is in violation of an applicable requirement at the time of permit issuance, the permitting authority must issue a schedule of compliance for that requirement in the Title V permit. The 1.5 microgram per cubic meter lead standard, however, is a National Ambient Air Quality Standard (NAAQS) and is not an applicable emission limit or enforceable permit condition. Therefore, this first quarter exceedance is not subject to the compliance schedule provision contained in the Title V regulations.

Even though the provisions of 40 C.F.R. § *70.5(c)(8)(iii)(c)* are not specifically applicable, Doe Run notes that it is already subject to a compliance schedule in the form of enforceable contingency measures that must be implemented when an initial or second exceedance of the lead NAAQS standard is recorded at any station in Herculaneum. As MDNR is well aware, these contingency measures are part of Missouri's State Implementation Plan and MDNR has made

this an enforceable condition in the draft Title V permit. Therefore, even if 40 C.F.R. § 70.5(c)(8)(iii)(c) was applicable, Doe Run is currently subject to a compliance schedule for any lead NAAQS exceedance and is operating in compliance with those requirements.

Response to Comment 3.(a) The APCP agrees that a compliance schedule exists for the violation of the lead NAAQS standard. See the response to Ms. Lipelis's Comment III.B.

Comment 3.(b) Startup, Shutdown, and Malfunction Plan
Ms. Lipelis also questioned whether the facility has a Startup, Shutdown, and Malfunction Plan. She stated that if the facility does not have such a plan that a compliance schedule should be set forth in the final permit requiring that the facility prepare one. Doe Run would like to clarify in response to this oral comment that Doe Run does have a startup, shutdown and malfunction plan for the Herculaneum lead smelter.

Response to Comment 3.(b) The APCP does not find Doe Run's original SSMP submittal adequate. See the response to Ms. Lipeles's Comment II.C..

Comment 4. Compliance Monitoring for Lead and SO_2 limits
Ms. Lipelis argued at the public hearing that the monitoring required in the draft permit is not sufficient to meet the periodic monitoring requirements contained in 40 C.F.R. § 70.6(a)(3)(i). However, Doe Run is subject to monitoring requirements for both its lead and S02 limits that meet the periodic monitoring requirement in the Title V regulations.

40 C.F.R. § 70.6(a)(3)(i)(B) provides:

> [w]here the applicable requirement *does not require* periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), [each Title V permit must contain] periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit, as reported pursuant to [70.6(a)(3)(iii)]. (emphasis added).

Contrary to the assertion of Ms. Lipelis, the draft permit does meet the periodic monitoring requirements because it requires testing to determine compliance for both the lead and sulfur limits set forth therein. Doe Run is required pursuant to the applicable lead MACT standard to conduct compliance testing for lead compounds on an annual basis. 40 C.F.R§63.1543. The test methods for compliance testing are set forth in 40 C.F.R. *§63.1546.* Only when the facility has three consecutive testing periods that show that the facility is in compliance with the lead emissions limits may it then run the compliance test every other year. Doe Run has had three consecutive periods of testing that establish its consistent compliance with the lead standards and the facility now, pursuant to the MACT regulations, tests every other year.

With regard to the applicable sulfur limit, the state regulations at 10 CSR 10-6.260(3)(D)2. also requires source testing as specified in subsection 10 CSR 10-*6.260(5)(B)* to establish compliance with the sulfur standard. Finally, pursuant to 10 CSR 10-6.180 Doe Run must perform additional testing to establish compliance with applicable limits upon the request of the MDNR. Doe Run

conducted stack testing in 2004 pursuant to the applicable state and federal regulations to establish compliance with its applicable lead and sulfur limits. Those test results are attached.

Response to Comment 4. The APCP is in agreement with Ms. Stotts's comments.

Comment 5.
In her comments, Ms. Lipelis referenced EPA's objections to Illinois's proposed Title V permit for Midwest Generation LLC's Fisk Generating Station to support her assertion that Doe Run's draft permit does not comply with the Title V periodic monitoring requirements. However, the permit conditions in the Fisk Generating Station proposed permit are distinguishable from those contained in Doe Run's draft permit. EPA concluded that the monitoring in the draft permit for the Fisk Generating Station did not meet the periodic monitoring requirements because there was no monitoring requirement aside from a general statement of the Illinois Environmental Protection Agency's authority to request testing for emissions to determine compliance with applicable standards. *See In the Matter of Midwest Generation, LLC Fisk Generating Station,* Order Partially Denying and Partially granting Petition for Objection to Permit at page 6. EPA objected because the *only* compliance monitoring required was this general statement of authority to require testing. However, while the Doe Run draft permit provides that MDNR has the same authority to require testing, it *also* affirmatively requires that Doe Run conduct compliance testing pursuant to the Lead MACT standard and the sulfur source testing regulations as explained above. This combination of overlapping testing obligations is more than adequate to meet the periodic monitoring requirements of Title V.

Response to Comment 5. The APCP agrees with Ms. Stotts's comment

Comment 6. Sulfur Emissions Limit
Finally, Ms. Lipelis stated that the sulfur emissions limit provided in 10 CSR 10-6.260 should include the sulfur emissions from Doe Run's acid plant. However, Doe Run's sulfur emissions limit does include those emissions. All of Doe Run's sulfur emission, including those from the acid plant, are emitted from the same stack at the facility and are therefore subject to the sulfur limit contained in 10 CSR 10-6.260.

Response to Comment 6. Please see the Response to Ms. Lipelis's Comment V.B.

Three persons made verbal comments at the public meeting, but did not submit written comments.

Mr. Aaron Miller, Environmental Manager for Primary Smelting at Herculaneum.

Comment 1. This permit is based on a permit application prepared by The Doe Run Company. It meets all of the applicable state and federal Clean Air Act requirements as well as the National Ambient Air Quality Standards, a State Implementation Plan for emissions of lead and sulfur, and monitoring, recordkeeping and reporting as required by the Missouri Code of regulations. Doe Run requested, received and incorporated input from the APCP into the draft permit. We

believe the result is a draft permit that addresses the concerns of the community and ensures safe operations that meets both state and federal requirements.

Plant operations have been modified to minimize the potential for fugitive and point source emissions from the facility for both lead and sulfur emissions. Since 2001, more than 12 million dollars have been spent on enclosures and emission control upgrades and improvements. Lead and sulfur compounds are under continuous monitoring by Doe Run and MDNR (ambient air). We regret the exceedance of the NAAQS for lead in the first quarter of 2005,and we believe this was an isolated incident affecting only one monitoring station. The other seven stations still remain in attainment. We have put measures into place to prevent a similar situation from happening. It is important to note that the facility has been in attainment for lead emissions for ten consecutive quarters prior to that, and we have been in attainment with the NAAQS sulfur emissions for more than a decade.

The Agency for Toxic Substances and Disease Registry is studying the impact of emissions on the area, and has issued several health consultations. The conclusion on sulfur emissions , dated October 2002, states that concentrations of sulfur dioxide detected in the ambient air pose no apparent public health hazard. The same applies to arsenic and cadmium at the 2002 levels, provided that the levels do not increase. In addition, the latest blood lead study conducted by the Missouri Department of Health and Senior Services in September 2002 revealed that there was a sixty-two percent reduction in children with elevated blood lead and that there were no new elevated blood lead (cases) in children or adults at that time.

The Doe Run Company, working with MDNR, is committed to the community and operating in a clean and safe manner. Doe Run employs 260 people at Herculaneum with an annual payroll of $17.7 million and provides more than $900,000 in property taxes each year. We're proud to be a part of the community and its future.

Response to Comment 1. No response.

Mr. Jack Warden, former Herculaneum resident.

Comment 1. When I hear a representative from Doe Run come up here and tell you that sixty-two percent of the children or less in this blood lead study – drive through town, see how many of the children have moved out. We've not only lost where we live, our home, we lost our community and it's not by choice. There were supposedly, regulations and things to protect us. We find out that's not true. We have to fight and scratch and yell and do all the bitching in the world to get the people to come in and do their jobs.

Now you have the opportunity in this Title V to address these issues and to try to justify some of this. There's still contamination going on. The buyout zone was three-eighths of a mile. There's contamination well past that three-eighths of a mile, into a half a mile, where yards are going to have to be re-dug. Homes are going to be recontaminated inside, which means children are going to be affected. It's time to put your foot down and get this addressed. You can't bring up another generation of children that are affected by letting something like this happen. It's

heartbreaking. You drive into town. I'm sure all of you can go back to your hometown, drive through your hometown, you can point to your children, your grandchildren, this is where we used to live. What are we going to have? We're going to have a plant spewing emissions out everywhere and contaminating, because nobody wants to stand up and make rules that we can enforce.

This application (draft permit) we got – I don't know. I couldn't understand a damn thing in that thing. And if I can't understand it, how am I going to know when they're doing something they shouldn't be doing? Because they were self-policed for so long, it took the community to come in and say, hey, this can't be right.

And then we started getting the involvement that should have been thirty, thirty-three years ago. But for some of these children, it's too late. You know, lead stays in them for fifty, seventy-five years. They're affected for the rest of their lives by the decisions you've made. And I hope you make the right ones.

Response to Comment 1. Response combined with response to the following comment.

Mrs. Leslie Warden, former Herculaneum resident, concerned parent.

Comment 1. I guess I can only repeat some of the things that you've heard here: that, you know, the saying, "The wheels of justice turn slowly," doesn't begin to describe our frustration over the last five years in trying to keep our children and our community protected. In fact, we don't live in the area anymore. But there are children who do. For the years that we lived here raising our own child, we thought that the Department of Natural Resources, the Environmental Protection Agency would not let contamination happen that would affect our children, that it would come into our homes and affect our children. We were wrong, very wrong.

We absolutely agree with the goals of this Title V as far as getting down clear and concise compliance strategies and enforcements. And that's what we hope that this permit will finally do. We're not experts, we're not environmental engineers, but I can tell you that over the last five years I have read (my) share of government documents. I have a copy of the permit. I couldn't get a clear consensus of anything out of it. And I think I could speak for a lot of the Herculaneum community, especially the parents, in saying this isn't good enough. We need clearer language, we need better enforcement. We want this to enhance the enforcement and better the enforcement for the generations of children coming up in this community.

Mr. Miller stood up here and said only one monitor was out of compliance for those two days. It's pretty insulting to the community. You know, that's a machine. Their filters are changed, results are tested on a regular basis. You have children, you have grandparents, you have parents living in this community that are basically human monitors, except testing isn't done on a regular basis on these people. And some of the consultations that he referred to were very limited inquiries, not studies, and certainly not long-term or ongoing studies.

So that is why this permit is so important to this community; that it be concise, that it enhance enforcement efforts and keep everything fair so everyone can understand what compliance is and when compliance doesn't occur.

Response to Comment 1. The APCP takes these comments very seriously. The program acknowledges and can appreciate the frustrations of community members who have been struggling for many years with the environmental and public health issues resulting from over one hundred years of lead smelting activity at this site.

The program has made several changes to the permit based on specific comments and suggestions received and feels that the permit has now been optimized and is written in accordance with federal and state law and rule and all guidance associated with Title V permitting. It is obvious from the many detailed comments we received that those providing comments spent a great deal of time to review the permit in a very thorough and detailed manner.

The program also acknowledges that not all issues raised are addressed in this permit. Some of the issues raised in the comments are more appropriately addressed through other mechanisms. The primary purpose of a Title V permit is to have one document that pulls together all legal requirements for an installation in order to enhance compliance. We believe the permit now accomplishes that purpose and has been improved through the public review process.

However, the program would like to note that the permit is not the only mechanism the APCP or the department has to address remaining problems. The department will continue to address the remaining environmental problems using a holistic, multi-media approach. We firmly believe this approach will allow us to find the most effective solutions to the environmental problems that continue to exist in the community and we are committed to working with the community until these problems are resolved.